The absorption of ...

S/120/62/000/002/004/047 E039/E420

dependence of the transmission on photon energy was measured using a 15 channel  $\gamma$  spectrometer recording electron positron pairs. Good agreement was obtained with theory. It is shown that the transmission increases with energy up to  $\sim 0.38$  at  $\sim 80$  MeV and then remains constant as the energy is increased to 250 MeV. There are 2 figures.

ASSOCIATION: Fizicheskiy institut AN SSSR (Physics Institute AS USSR)

SUBMITTED: July 6, 1961

Card 2/2

32008 \$/089/62/012/001/011/019 B102/B138

24.6730

AUTHOR:

Ado, Yu. M.

TITLE:

Particle storage in a synchrotron

PERIODICAL:

Atomnaya energiya, v. 12, no. 1, 1962, 54-55

TEXT: It is shown that particles can be stored in a synchrotron without altering its construction. The H-field of the one considered is given in the figure. The particle energy fluctuates between  $E_{min}$  and  $E_{max}$ , and at the moment to the particles have smaller amplitudes of phase oscillations than at  $t_1$  and the separatrix dimensions are somewhat reduced. These dimensions are easily varied by amplitude modulation of the h-f field by  $\Delta U$ , as shown in the figure. To avoid the build-up of phase oscillations by quantum fluctuations,  $E_{max}$  should be smaller than  $E_{1/5} = mo^2 (\frac{mcR}{\hbar})^{1/5}$ , m - electron rest mass, R - : dius of synchrotron orbit. The efficiency of the synchrotron in storage operation can be determined from the radiation

Card 1/42



32008 S/089/62/012/001/011/019 B102/B138

Particle storage in a synchrotron

damping of the phase oscillation amplitudes: With

$$A_{2}=A_{1} \exp \left[-\frac{1}{2} \int_{t_{1}}^{t_{2}} \gamma dt\right],$$

$$\gamma = \frac{2}{3} \frac{e^{2}}{R^{3}mc} \left(\frac{E}{mc^{3}}\right)^{3} \frac{3-4n}{1-n}.$$
and 
$$E = E_{\max} (1-\cos \omega t)/2$$

$$A_{1}=A_{1} \exp \left[-\alpha \left(\frac{E_{\max}}{mc^{3}}\right)\right].$$

$$\alpha = \frac{5}{24} \frac{e^{3}\pi}{R^{2}mc\omega} \frac{3-4n}{1-n}.$$

is derived.  $A_i$  is the amplitude at  $t_i$ . For an accelerator with R=80 cm,  $E_{max}=E_{1/5}=150$  MeV,  $\omega=314$ , n=0.6, one finds  $A_2=0.883A_1$ . The particles which at  $t_1$  cover a phase area of  $S_1$  will cover  $S_2$  at  $t_2$ . Since the area on the phase plane is proportional to the square amplitude of the phase oscillations,  $S_2=0.78$   $S_1$ . The number of stored particles is proportional to  $S_1-S_2$ . When injection takes place at  $t_2$ ,  $t_3$ , ... the Card  $2/A_2$ 

Particle storage in a synchrotron

32008 S/089/62/012/001/011/019 B102/B138

amount of particles in the separatrix is raised at every step by about 20 % of those particles which would be captured in the synchrotron with accelerating operation. Coulomb repulsion starts acting only at very high densities. E.g. for 6-10 Mev injection electrostatical defocusing forces become equal to magnetic focusing forces at an orbital current of  $10^2-10^3$  a. This method is applicable to electrons as well as positrons. Professor P. A. Cherenkov, A. Ya. Belyak and K. A. Belovintsev are thanked for discussions. There are 1 figure and 4 Soviet references.

SUBMITTED: July 14, 1961

V

Card 3/4,

24,6720 26,2357 33961; \$/089/62/012/003/001/013 B102/B108

AUTHORS:

Ado, Yu. M., Belovintsev, K. A., Stolyarov, S. N.

TITLE:

Bremsstrahlung spectrum of 260-Mev electrons

PERIODICAL: Atomnaya energiya, v. 12, no. 3, 1962, 193 - 197

TEXT: The bremsstrahlung spectrum of 260-Mev electrons from the synchrotron of the FIAN was measured on a simple arrangement with a 15-channel gamma pair spectrometer of a total dispersion of  $3.3 \cdot 10^{-2}$ . The efficiency of gamma-quantum recording was  $8.25 \cdot 10^{-6}$ , radiation intensity was equal to  $1.2 \cdot 10^{7}$  MeV/cm<sup>2</sup>·sec. Experimental error was 5%. The experimental results were compared with the calculated number of photons  $N^{T}(t,k)$  of energy k at a depth t in the target, which in first approximation (error 2-3%) is

Card 1/0 3

33964 5/089/62/012/003/001/013 Bremsstrahlung spectrum of... B102/B108

 $N_{1}(t, k) \simeq N_{*}(0, E_{*}) \sigma_{1}(k, E_{0}) t e^{-\alpha t} \left\{ 1 + t \left[ 0.5\alpha - 0.305 + 0.722 I_{1}(\eta) + 0.722 \frac{k}{E_{0}} \left( \left( 1 + \ln \frac{E_{*}}{k} \right) \ln \ln \frac{E_{*}}{k} + 1 \right) \right] \right\}. (3)$ THE  $I_{1}(\eta) = \int_{0}^{\pi} \ln \frac{E_{*}}{k} \left[ \left( 1 + \ln \frac{E_{*}}{k} \right) \ln \ln \frac{E_{*}}{k} + 1 \right] \right] \cdot (3)$ 

The bremsstrahlung cross section  $\sigma_{T}(E,k) \simeq 1/k$ ;  $\eta = \ln(E_{0}/k)$ ;  $n_{0}^{V}(t,\eta)$ 

 $=\int_{0}^{t} e^{\alpha t} W(t',\eta) dt'$ . Eo is the energy of the primary electrons. When

multiple photon emission is taken into account, agreement between theory and experiment is improved. The spectrum distortion owing to the collimator effect does not exceed 2%. The material (foil, air, window) through which the gamma ray passes has an influence on the spectrum only in the low-energy range. The discrepancy between experiment and Schiff's theory (Phys. Rev., 83, 252 (1951)) is due to multiple phonon emission from one electron. Professor P. A. Cherenkov is thanked for discussions, Engineer M. P. Piskov and Technician Yu. I. Krutov for help. There are 3 figures

rand 2/1 3

Bremsstrahlung spectrum of...

3396h 5/089/62/012/003/001/013 B102/B108

and 14 references: 4 Soviet and 10 non-Soviet. The four most recent references to English-language publications read as follows: J. Lawson Nucleonics, 10, 61 (1952); R. O'Rourke, A. Anderson. Phys. Rev., 99, 1484 (1955); L. Eyges. Phys. Rev., 81, 982 (1951); R. Wilson. Proc. Phys. Soc., A66, 638 (1953).

SUBMITTED: July 14, 1961

Fig. 2. Experimental results compared with results from Schiff's theory and Eq. (3) (curve 2). For curve 1 a correction was made for spectrometer dispersion only, for curve 2 multiple phonon emission was taken into account. E<sub>0</sub> = 260 MeV, target (tungsten) thickness 0.15 radiation units. Abscissa: E<sub>y'</sub>, MeV, ordinate: radiation intensity, arbitrary units.

Card 3/4 3

ACCESSION NR: AT3012929

\$/2504/63/019/000/0066/0097

AUTHOR: Ado, Yu. M.

TITLE: Incoherent electron radiation in a synchrotron and some of its applications

SOURCE: AN SSSR. Fizicheskiy institut. Trudy\*, v. 19, 1963, 66-97

TOPIC TAGS: synchrotron, cyclic accelerator, electron acceleration, electron incoherent radiation, accelerator operation, electron optical radiation spectrum, electron cluster, electron cluster azimuth

ABSTRACT: Experiments are described, performed with the 280 MeV synchrotron of the Fizicheskiy institut im. P. N. Lebedeva AN SSSR (Physics Institute AN SSSR), concerning some properties of incoherent electron radiation which always accompanies electron acceleration in cyclic accelerators, and the application of this radiation to problems connected with accelerator operation. The study covers the spectral characteristics of electron optical radiation and several applications of the optical radiation of electrons (determination of the number of accelerated electrons, determination of the number of

Card 1/22

ACCESSION NR: AT3012929

electrons prematurely reaching the target during the acceleration process, measurement of the azimuth of a cluster of accelerated electrons). The experiments have shown that many characteristics and features of the accelerator can be investigated with the aid of the radiation from the electrons. Further experiments will undoubtedly contribute to a deeper investigation of the mechanism of acceleration of electrons in the cyclic accelerators. Appendices include the calculation of the bremsstrahlung intensity in the 280 MeV synchrotron, a theoretical calculation of the azimuthal length of the electron cluster. Reports of the experimental data are accompanied by a mathematical analysis. "In conclusion, the author is grateful to the entire synchrotron crew and to Professor P. A. Cherenkov for continuous interest in the work." Orig. art. has: 27 figures, 29 formulas and 1 table.

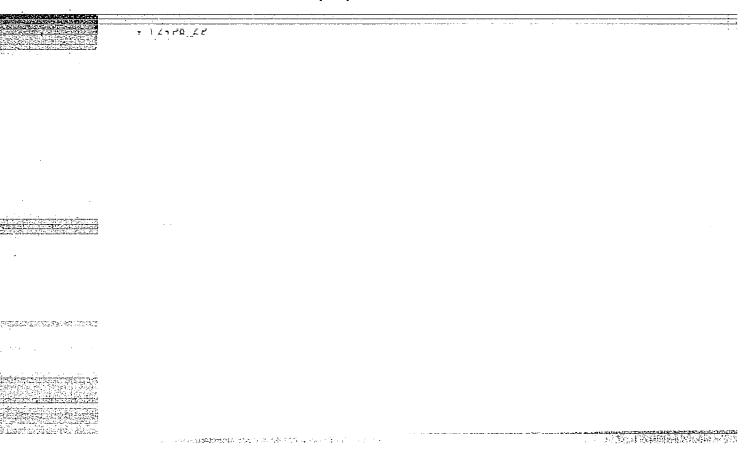
ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva AN SSSR (Physics Institute, AN SSSR)

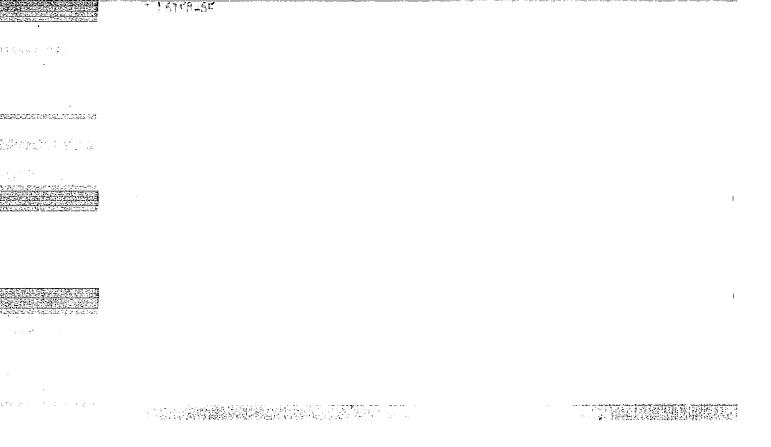
Card 2/32

ACCISION NR: AT50079)?

(10000144/000/00355/0357)

1. 1.6158-65





TITLE: Influence of synchrotron radiation on colliding particle bears in storage
SOURCE: International Conference on High Energy Accelerators. Dubna, 1963. Trudy

where s is the electron charge, s is the velocity of light, m is the mass of the electron charge, s is the velocity of light, m is the mass of the

The number of photons n that interact with the colliding beam in unit time equals  $\frac{\pi_{\text{out}} \frac{\overline{W}}{\hbar w_1} \cdot \frac{\overline{\Psi}}{2\pi}}{\pi_{\text{out}}}$ The probability of loss of electrons p is

 $p = n \frac{\vec{o}}{3} \cdot \frac{\eta}{\vec{q}}$ 

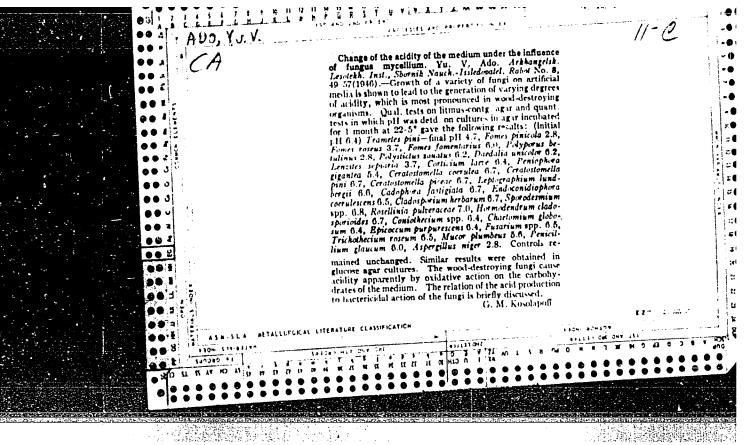
where q is the number of collisions in colliding beams for more -

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ADO, MORE, TO THOUSEN, Ye.G.; CHEMINKOV, P.A.

Experiments on electron accumulation in a synchrotron. Atom. energ. 18 no.2:104-107 F 165. (MIRA 18:3)



kandidat tekhnicheskikh nauk; SIZOV, V.N., kandidat tekhnicheskikh nauk; PKVZHER, A.S., redaktor izdatel stva; GUSEVA, S.S., tekhnicheskiy redaktor

[Instructions for steaming concrete and reinforced concrete elements in plants and yards (I 206-55/MSPMKhP)] Instruktsiia po proparivaniiu betonnykh i zhelezobetonnykh izdelii na zavodakh i poligonakh.
(I 206-55/MSPMKhP) Moskva, Gos. izd-vo lit-ry po stroit. i arkhitekture, 1956. 17 p.

(MLRA 10:1)

1. Russia (1923- U.S.S.R.) Ministerstvo stroitel'stva prdpriyatiy metallurgicheskoy i khimicheskoy promyshlennosti. Tekhnicheskoye upravleniye. 2. Laboratoriya betonov i vyazhushchikh TSentral'nogo nauchno-issledovatel'skogo instituta promyshlennykh sooruzheniy (for Mironov, Arobelidze, Sizov)

(Concrete)

RUMANIA / Farm Animals. Cattle.

Q

Abs Jour

: Ref Zhur - Biologiya, No 5, 1959, No. 21234

Author

: Andrei, N.; Marin, L.; Popa, I.; Adochitei, C.

Inst

: Not given

Title

: Investigations of the Problem of Morphologic-

Productive Properties in Cows of the Pinzgau Breed

at the Cotusca State Farm

Orig Pub

: Probl. zootehn. si veterin., 1958, No 4, 13-21

Abstract

: The Pinzgau cattle at the Cotusca State Farm has a well proportioned and strong body build and possesses a lively disposition. The cows' average milk yield amounts to 3165 liters, the maximum being 6157 liters.

Card 1/1

CIA-RDP86-00513R000100330002-2" APPROVED FOR RELEASE: 06/05/2000

<u>I 43722-65</u> EUG(3)/EUT(m)/EPF(c)/EPR/7/IP(t)/EIP(h) Pr-4/Pa-4 JJP(c)

porosity and the effective surface decrease substantially (S=10 m²/g) at 400C.

Additional heating to 450C results in an adsorbent with still lower adsorption properties (S=73.0 m²/g). The authors verified the character stic change in the dioxide's coloring from white to light brown when it is exacuated in a vacuum and heated to 300C. The color changes from light brown to black as the material is heated in a vacuum to 450C. Such changes in the dioxide when heated and evacuated indicate a process of oxyge impoverishment and formation of material with altered chemical properties, representing a significant and interesting subject for further research. From the authors' summary.

SUB CODE: NC, MM

ENCL: 00

Cord

ADOLF, L.

What must one keep in mind in construction of industrial buildings? p. 215 NOVA PROIZVODNJA. Ljubljana. Vol. 6, no. 3, Aug. 1955

SOURCE: East European Accessions List (EEAL), <sup>1</sup>C, Vol. 5, no. 2, Feb. 1956

Dissertation: "Monograph of the Antelope-Saiga." Moscow City Pedagogical Inst imeni V. P. Potemkin, 2 Jun 47.

SO: Vechernyaya Moskva, Jun, 1947 (Project #17836)

ADOL'F, T. A.

Adol'f, T. A. - "The growth and development of bear cubs by observing them at the Moscow zoo in 1940," Trudy Mosk. zooparka, Vol. IV, 1949, p. 78-91, - Bibliog: 12 items

SO: U-4355, 14 August 53, (Letopis 'Zhurnal 'nykh Statey, No. 15, 1949)

ADOL'F, T. A.

Adol'f, T. A. - "Certain data on the growth and development of Ezhungar hamster - Fhodopus songarus Pall," Trudy Mosk. 200parka, Vol. IV, 1949, p. 92-99

SO: U-4355, 14 August 53, (Letopis 'Zhurnal 'nykh Statey, No. 15, 1949)

ADOL'F, T.A.; BASHENINA, N.V.; DUKEL'SKAYA, N.M.

Long-lasting winter rodent control spots. Biul. Glav. bot sada no.24:97-99 '56. (MLRA 9:11)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova (for Adol'f) 2. Moskovskiy oblastnoy pedagogicheskiy institut imeni Potemkina (for Bashenina) 3. Glavnyy botanicheskiy sad Akademii nauk SSSR (for Dukel'skaya).

(Rodent control) (Zinc phosphides)



Dynamics of the distribution and populations of saiga. Ochr. prir. i zapov. delo v SSSR no.2:125-139 '57. (MIRA 10:8)

1. Moskovskiy gorodskoy pedagogicheskiy institut imeni Potenkina. (Saiga)

ADOL'F, V. A.

"Utilization of Enlarged Maps From the Textbook by N. N. Baranskiy and of Economic Geography Tables for Geography Classes of the 8th Grade," a report which was discussed at one of the 1953 meetings of the Dept. of School Geography, Moscow Affiliate, AU Geographic Society, Iz. vses Geograf. Obshch., No.6, 1954.

ADOL'F, V. A.

K. A. Katsevich, V. A. Adol'f, I. V. Novitskiy, et al., Traktor KhTZ-7 (The KhTZ-7 Tractor), Selkhozgiz, 23 sheets.

The booklet describes the construction and regulation of the garden-and-truck farm tractor KhTZ-7, gives instructions for the oper tion and maintenance of the tractor, treats the construction of a shed system for agricultural machines working with the KhTZ-7 tractor, and gives the technical data of the tractor, rules for washing and parking it, a table of the principal assembly tolerances, and other information.

.50: U-6472, 18 Nov 1954



ADOL'F, Viktor Alekeandrovich; LEBEDENSKIY, G.V.; MEYLIKHOV, M.M.;

MEKSIN, M.A.; SEPITYY, V.T.; MEDVEDEV, I.N., inzhener, redaktor;

KOBYLIAKOV, L.M., redaktor; PERESYNKINA, Z.D., tekhnicheskiy

redaktor; BALLOD, A.I., tekhnicheskiy redaktor

[Disassembling and assembling KhTZ-7 tractors] Razborka i sborka traktora KhTZ-7. Pod red. I.N.Medvedeva. Moskva, Gos. izd-vo selkhoz. lit-ry, 1956. 194 p. (MLRA 9:7) (Tractors)



ADOL'F, Viktor Aleksandrovich, inzh.; LEBEDINSKIY,G.V., inzh.; MEK-SIN ,M.A., inzh.; NOVITSKIY,I.V., inzh.; PESTRYAKOV,A.I., red.; GUREVICH,M.M., tekhn.red.

[DSSh-14 self-propelled chassis] Samokhodnoe shassi DSSh-14. Pod red. G.V.Lebedinskogo. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1959. 181 p.

(MIRA 14:5)

1.Khar'kovskiy traktorosborochnyy zavod (for Adol'f, Lebedinskiy, Meksin, Novitskiy)

(Tractors)



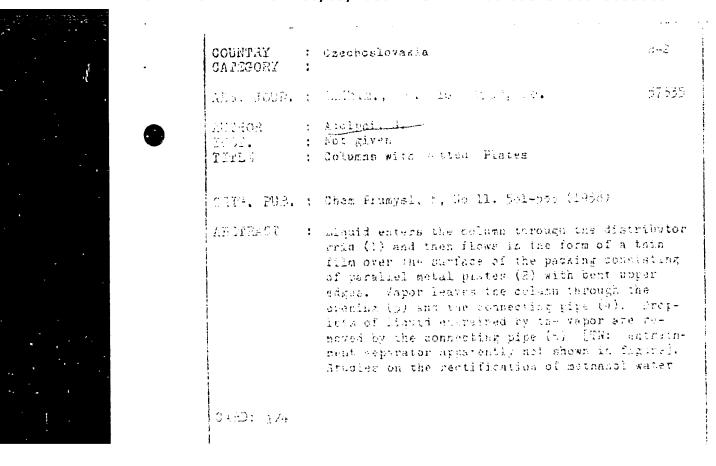
ADOL'F, V.A.; PAVLOVA, A.N.; PODRIGALO, A.I.; LEBEDINSKIY, G.V.,
inzh., red.; ARTYUKHIN, V.A., red.izd-va; EL'KIND, V.D.,
tekhn. red.

[Catalog of parts for the T-16 self-propelled chassis]
Katalog detalei samokhodnogo shassi T-16. Moskva, Mashgiz,
1963. 182 p. (MIRA 17:2)

1. Khar'kovskiy traktorosborochnyy zavod. 2. Otdel glavnogo konstruktora Khar'kovskogo traktoresborochnogo zavoda(for Adol'f, Pavlova, Podrigalo).

SEREBRYAKOV, I.H., inch.; LEBIDEV, A.f., inch.; Abolif. V.A., inch.

Experimental automotive chassis with an automatic hydraulic displacement drive. Mashinostroenie no.4:94-95 Jl-Ag '64. (MIRA 17:10)



	COUNTRY CATEGORY	:	Czecnoslovakia	4-2
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AUOLHOWNH, 1.

Poland/Physical Chemistry - Photochemistry. Radiation Chemistry. Theory of the Photographic Process, B-10

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 61114

Author: Dorabialska, A., Kroh, J., Adolfowna, I.

Institution: None

Title: Potentiometric Investigations of the Chemiluminescence of Luminol

Original

Periodical: Badania potencjometryczne w dziedzinie chemiluminescencji juminolu,

Zesz. nauk Politechn. lodzkiej, 1955, No 9, 3-15; Polish; Russian

and English resumés

Abstract: Investigation of the kinetics of oxidation of luminol with H2O2,

involving chemiluminescence, by measuring the oxidation-reduction potential. The experiments were conducted at different pN in the absence and in the presence of hemoglobin (0.04%) as a catalyst. Electromotive force was investigated from beginning of reaction to the reactive of Equilibrium. In all instances there was observed

an increase in potential up to the moment of equilibrium while

Card 1/2

LERINMAN, R.M.; SHCHEGOLEVA, T.V.; PAVLOVA, G.V.; ADOLINA, T.I.

Electron microscopy of plastic deformations in aluminum-silver alloys. Fiz. met. i metalloved. 18 no.4:623-630 0 '64. (MIRA 18:4)

1. Institut fiziki metallov AN SSSR.

VITKAUSKAS, Vytautas; ADOMAITIENE, V., red.; BALCIUMAS, L., tekhn.

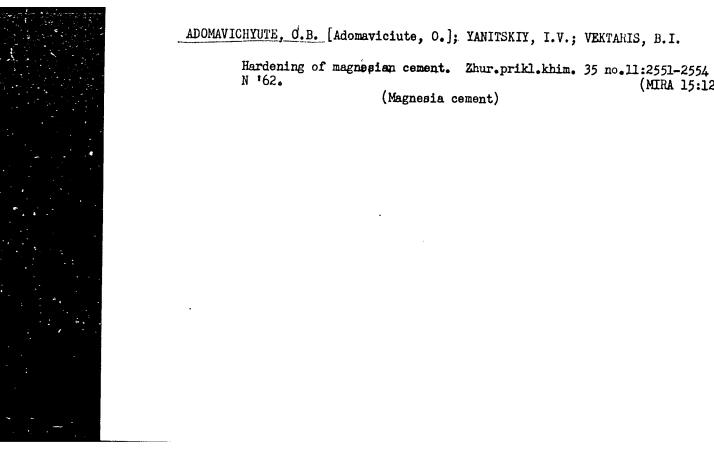
[Work of a rural construction worker] Kaimo statybininko darbai. Vilnius, Lietuvos TSR Ministru Tarybos Valstybinio statybos ir architekturos reikalu komiteto Centrinis technines informacijos ir propagandos biuras, 1961. 155 p. (MIRA 15:3) (Farm buildings)

ADOMAVICHTUTE, O. B., Cand Tech Sci -- "On the processes of Machine and increased water-proof capacity of magnesian cement." Kaunas, 1961. (State Com of Higher and Res Spec Ed of the Council of Ministers Lissa. Kaunas Folytech Inst) (KL, 8-61, 240)

- 194-

- 193 -

(MIRA 15:12)





VITKAUSKAS, J., red.; ZVIRENAS, A., red.; SERKSNYS, J., red.;

ADOMAVICIUS, B., red.; BARAHAUSKAS, B., red.; PETRUSEVICIUS, V., red.; GLEVAVICIENE, S., red.

[Problems of the mechanization of agricultural production]
Zemes via ganybos mechanizavimo klausimai. Vilnius, laidykla
"Mintis," 1964. 118 p. [In Lithuanian] (MIRA 18:2)

1. Lietuvos zemes ukio mechanizacijos ir elektrifikacijos mokslinio tyrimo institutas.

USSR/Soil Science. Organic Fertilizers

J-4

Abs Jour : Ref Zhur - Biol., No 10, 1958, No 43867

Author : Adoraviciuto J.

Inst : The Lithuanian Scientific Research Institute of Agriculture Title : Increasing the Effectiveness of Lupine for Green Manure by

Means of Peat

Orig Pub : Tr. Lit. n.-i. in-ta Zemled., 1957, 3, 173-205 (Lithuanian;

res. Russ.)

Abstract: As a result of field tests made on peat-silt light loam soil of the training farm of the Lithuanian Agricultural

Academy and on peat-podzolic sandy soil, high winter rye yield boosts were obtained by applying lowland peat to annual lupine not only in large doses (40 t. per ha.) while plowing, but in doses of 10 t. per has. in application with a cultivator in mixture with Pc. In an instance where factory granulated Pc was used, the effect of this mixture is equal in effectiveness to 20 t. per ha. of manure. The bibliography

Card: 1/1 lists 35 titles. --N.N. Sokolov

20

ADOMAYTENE, S.V.; SLADROV, A.M.; SHISHROV, V.P.

Condensation of vinyl ethers with amides. Part 2. Zhur. ob. khim.
34 no.9:2958-2960 S '64.

(MIRA 17:11)



ADOMAYTIS, A.I., inzh.

Construction of precast bridges for the Klaipeda coal sorting complex. Shakht.stroi. 8 no.3:22-24 Mr 164. (MIRA 17:3)

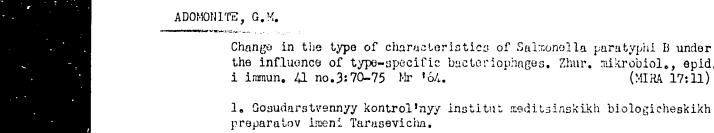
1. Stroitel'noye upravleniye  $10.31~\mathrm{Maypedskogo}$  stroitel'nogo tresta.



The general council of our hospital — an active aid for the administration and controller. Sveik. apsaug. 8 no.1:29-31 Ja\*63.

1. Kauno m. II ligonine.

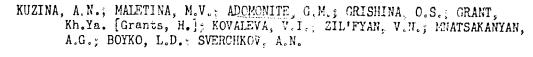
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ADOMONITE, G.M.

the influence of type-specific bacteriophages. Zhur. mikrobiol., epid. i immun. 41 no.3:70-75 Mr 164. (MIRA 17:11)

1. Gosudarstvennyy kontrol'nyy institut meditsinskikh biologicheskikh preparatov imeni Tarasevicha.



Authors' abstracts. Zhur. mikrebiol., epid. i immun, 41 no.11:138-143 '65. (MIRA 18:5)

1. Irkutskiy institut epidemiologii i mikrobiologii (for Kuzina, Maletina). 2. Gosudarstvennyy kontrol'nyy institut meditsinskikh biologicheskikh preparatov imeni Tarasevicha (for Adomonite). 3. L'vovskiy institut epidemiologii, mikrobiologii i gigiyeny (for Grishina). 4. Rizhskiy meditsinskiy institut (for Grant). 5. Dagestanskiy institut po proizvodstvu pitatel'nykh sred (for Kovaleva). 6. Yerevanskiy meditsinskiy institut i Respublikanskaya sanitarno-epidemiologicheskaya stantsiya (for Zil'fyan, Mnatsakanyan). 7. Kiyevskiy institut epidemiologii i mikrobiologii (for Boyko, Sverchkov).



ADOMONITE, G.M.

Phagotypes of Salmonella paratyphi B cultures examined by means of the Felix and Callow standard method. Zhur. mikrobiol., epid. i immun. 42 no.11:34-36 N '65.

MIRA 18:12)

1. Gosudarstvennyy kontrol'nyy institut meditsinskikh biologicheskikh preparatov imeni Tarasevicha. Submitted March 23, 1964.

1. 08749-67 EWT(1) JK ACC NR: AP6034529

SOURCE CODE: UR/0016/66/000/010/0144/0144

AUTHOR: Adomonite, G. M.

ORG: State Control Institute of Medical and Biological Preparations im. Tarasevich, Moscow (Gosudarstvennyy kontrolnyy institut meditsinskikh biologicheskikh preparatov)

TITLE: Phage sensitivity and lysogenic state of antibiotic resistant variants of type B paratyphoid bacilli

SOURCE: Zhurnal mikrobiologii, epidemiologii i immunobiologii, no. 10, 1966, 144

TOPIC TAGS: imman-aidment, paratyphoid, paratyphoid type B, antibiotic resistance, phage sensitivity, lysogeny, lysogenic state, bacteriophage, ANTIBIOTIC, STREPTONICIA, TETRNCYCLINE, IMPECTIVE DISERSE.
ABSTRACT: The phage types of paratyphoid bacilli resistant to streptomycin, tetracycline, monomycin, and levomycin were determined. These resistant variants had been obtained after 20—34 passages in vitro.
All strains were identified as known phage types. [W.A. 50]

SUB CODE: 06/ SUBM DATE: 12Apr66/ ORIG REF: 001

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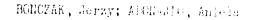
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ADONAJIO, A.

"Tularemia, a disease of hares", p. 5; "Read about dysentery", p. 5, (ZDROWIE, Vol. 5, No. 8, 1953, Warszawa, Poland)

30: Monthly List of European Accessions, L.C., Vol. 3, No. 4, April, 1954



Analysis of cauca of bacillary dysentery treater, under animalatory conditions. Pulgal. epidom. 18 no. 1:19-13 (e.g.

1. Z Poradni Schorzen Jelitowych Warszawa -- Praga Polnec (Kierownik: lek. med. J. Bonezsk) i a Zakiedu bylaczeki kierownik: prof. ar. J. Ferricewik:

KOSTRZEWSKI, J., GHUZEWSKI, A. ADONAJIO, A.

n voice gin

Sporadic typhoid fever. III. Attempted prediction of intensity of typhoid fever in interspidents periods. Pregl. epidem. 7 no.3:179-186 1953. (CIML 25:5)

1. Of the State Institute of Hygiene and of the Institute of Epidemiology of Warsaw Medical Academy.

APPROVED

EXCEPPTA DEDICA Sec 17 Vol 5/10 Public Health Cot 59

2880. EPIDEMIOLOGICAL FEATURES OF WHOOPING COUGH IN LENINGRAD IN 1953-1955 - Epidemiologiczna charakterystyka krztuśca w Leningradzie w latach 1953-1955 - Adona to A. Praca Wykonana, Leningrad. Sanit.ing. Med. Inst., Przy Kat. Epidemiol. - PRZEGL, EPIDEM. 1958, 12 3

The main reason for conducting this investigation was to reveal the epidemiological features of whooping cough in a big city and to establish the origin of high incidence of it in organized children's institutions (nurseries, kindergartens, children's homes). This work contains a statistical section covering incidence and mortality according to age groups and seasonal appearance. The author's observation covered 22 children's institutions and 103 private flats in which cases of whooping cough were reported. Bacteriological and serological investigations were carried out in the earliest period of the illness, as well as in abortive cases of whooping cough. In the children's institutions mentioned 2,095 children were under observation, 28 epidemic outbreaks were observed, as well as 8 instances where introduction of the infection caused no epidemic in the establishment. In private flats 513 children were under observation: 454 bacteriological and 162 serological tests were conducted. Of the total number of children in the establishments who had previously not been ill with whooping cough and who came into contact with persons ill with whooping cough, 44.6% fell sick. In private flats only 30% of such children fell sick. Early bacteriological examinations allowed a lowering of the number of consecutive cases to half. During the catarrhal stage of whooping cough 94% positive results in bacteriological examinations were obtained, whereas up to the 9th day of the illness the results were 100% positive. The following reasons for the high incidence in the children's institutions were established: failure to apply methods of early bacteriological diagnosis, failure to adhere to sanitary and antiepidemic measures, and unsatisfactory sanitary conditions in the institutions. In observing children in prolonged contact with whooping cough, it was established that none of them, even those in closest contact with a sick person, fell sick later than the 22nd day from the beginning of the illness of the children who were the source of infection. These data allowed an eventual shortening of the quarantine period by 10 days in healthy children coming in contact with whooping cough cases (up to this time a 40-day quarantine had been compulsory).

ADONAJLO, Amiela; NARUSZEWICZ, Danuta; PIATKOWSKI, Jerzy

Comparative evaluation on human subjects of immunizing properties of anti-whooping cough vaccines of domestic production. I. Laboratory evaluation of the whooping cough component in 3 diphtheria-tetanus-whooping cough vaccines and serological reactions in vaccinated children. Przegl.epidem. 15 no.2:151-156 '61.

1. Z Zakladu Epidemiologii PZH Kierownik: prof. dr J. Kostrzewski i z Zakladu Epidemiologii AM Kierownik: prof. dr F. Przesmycki.

(WHOOPING COUGH immunol) (VACCINES)
(TETANUS immunol) (DIPHTHERIA immunol)
(TETANUS immunol)



ADONAJLO, Aniela; MALYSZKO, Halina; PIATKOWSKI, Jerzy; DZIKOWSKA, Janina; MAGDZIARZ, Henryka; GILEWSKA, Aniela

Comparative evaluation on human subjects of immunizing properties of anti-whooping cough vaccines of domestic production. II. Post-vaccinal reactions after the application of diphtheria-tetanus-whooping cough vaccines. Przegl.epidem. 15 no.2:157-162 61.

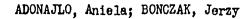
1. Z Zakladu Epidemiologii PZH Kierownik: prof. dr J. Kostrzewski i ze Staeji San. Epid. dla m. st. Warszawy Dyrektor: dr E. Nierenska.

(VACCINES) (DIPHTHERIA immunol) (TETANUS immunol) (WHOOPING COUGH immunol)

NESTERENKO, M.Z.; ZDANOW, W.M.; ZUKOWSKI, A.M.; Tlum: dr.med. ADONAJLO, A.

Studies on the epidemiology of influenza A2. Przegl. epidem. 15 no.3:265-278 '61.

1. Instytut Wirosologii im. D.J.Iwanowskiego ANM ZSRR, Moskwa. (INFLUENZA ASIAN epidemiol)



Tapeworm infection in the light of an intestinal disease clinic in the northern section of Praga in Warsaw. Przegl. epidem. 15 no.4:425-427 '61.

(TAPEWORM INFECTIONS epidemiol)

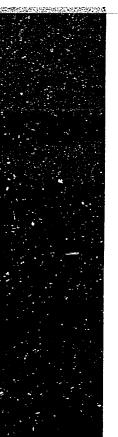
POLAND

ADONAJLO, Aniela; technical aid: Jerzy PIATKOWSKI, Jenina DZIKOWSKA, Henryka 'MGDZIARZ, Aniela GILEWSKA: of the Department of Epidemiology (Zaklad Epidemiologii), PZH /Fanctwowy Zaklad Higheny -- State Institute of Hygiems, Director: Prof Dr J. KOSTRZEWSKI; and the Capital City of Warsaw Station of Health and Epidemiology (Stacja Sanitarno-Epidemiologiczna dla m. st. Warszawa), Director of the Epidemiology Division: graduate physician H. MALYSIKO

''Comparative Evaluation of the Immunogenic Potency of Anti-Wooping Cough Vaccines. III. Epidemiological Evaluation of the Pertussis Component of Di Te Per Combined Vaccines'

Warsaw, Przeglad Epidemiologiczny, Vol XVI, No 4, 1962 pp 423-430

Abstract: /Authore' English summary modified/ Some epidemiological observations were made on children born in 1959, 1960 and 1961 in the City of Warsaw immunized with Di Te Per vaccines. It appeared that pertussis incidence was as high as



ADONAJLO, Anielo; pom. techn. PIATKOWSKI, Jerzy; DZIKOWSKA, Janina; MAGDZIARZ, Henryka; GILEWSKA, Aniela

Comparative evaluation of human antipertussis vaccines of domestic production. III. Epidemiological evaluation of the pertussis component of diphtheria-tetanus-pertussis vaccines. Przegl. epidem. 16 no.4: 423-430 '62.

1. Z Zakladu Fpidemiologii PZH Kierownik: prof. dr J. Kostrzewski i ze Stacji Sanitarno-Epidemiologicznej dla m. st. Warszawy Kierownik Dzialu Epidemiologii: lek. med. H. Malyszko.

(PERTUSSIS VACCINE) (DIPHTHERIA) (TETANUS)

POLAND

ADONAJLO, Aniela, VYSOKA-BURIANOWA, Bela, and PELLAR, Tomasz, Chair of Medical Epidemiology, Division of Hygiene, Charles University [original version not given] in Prague, Czechoslovakia (Director: Prof. Dr. K. RASKA) and the Epidemiology Research Office (Zaklad Epidemiologii), State Institute of Hygiene (Panstwowy Zaklad Higieny) in Warsaw (Director: Prof. Dr. J. KOSTRZEWSKI)

"Course of Parapertussis Epidemic in Two Kindergartens in Prague-10 (Czechoslovakia)."

Warsaw, Przeglad Epidemiologiczny, Vol 17, No 3, 63, pp 207-213

Abstract: [Authors' English summary modified] Identification of B. parapertussis in two kindergartens in Prague, where most children had been vaccinated against pertussis, was followed with a study covering all children, members of the staff, and their families (342 persons). The para bacillus was found in 35 and 47% of the children and in an average of 15% in members of their families, with children accounting for 75% of the latter. The bacillus was found in 31.5% of cases 1-6 weeks after treatment with chlorame phenicol. 5 refs: 1 Soviet, 1 Western, 3 Czechoslovakian.

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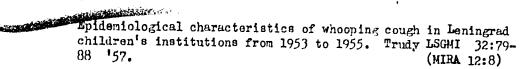
Pamiatka sborshchika po montazhu metallicheskikh konstruktsii gidroelektrostantsii (Handbook for metal fitters working on the construction of hydroelectric power plants) Moskva, Gosenergoizdat, 1953. 80 p.

SO: Monthly List of Russian Accessions, Vol 7, No 9, Dec 1954

ADONAYLO, A. Cand Med Sci -- (diss). "The Epidemiological Characteristic of Petrussis in KENNEYMANN Leningrad; the Measur for Counteraction and Prophylaxis." Len, 1957. If pp 21 cm. (Min of Health RSFSR, Len Sanitary-Hygienic Medicine Inst) (health RSFSR, Len Sanitary-Hygienic Medicine Inst) (200 copies (KL, 17-57, 99)

- 61 -

ADONAYLO, A.H.



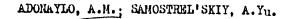
1. Kafedra epidemiologii Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta (zav.kafedroy - prof. V.A.Bashenin). (WHOOPING COUGH, epidemiol. in Russia in child. institutions (Rus))

ADONAYLO, A.M.

Importance of the bacteriological method for the early diagnosis of whooping cough in children's institutions. Trudy LSGMI 32: 89-94 '57. (MIRA 12:8)

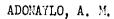
1. Kafedra epidemiologii Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta (zav.kafedroy - prof.V.A.Bashenin). (WHOOPING COUGH, diag.

early, bacteriol. methods (Rus))



Quarantine periods for whooping cough. Trudy LSGHI 32:95-99 157. (MIRA 12:8)

l. Kafedra epidemoplogii Leningradskogo sanitarno-gigiyenicheskogo instituta (zav.kafedroy - prof. V.A.Bashenin). (WHOOPING COUGH, prev. & control quarantine, problems in shortening period (Rus))



"The inportance of laboratory diagnosis of whooping-cough in the antiepidemic practice."

Report submitted to the 13th All-Union Congress of Hygenists, Epidemiologists, and Infectionists. 1959

USSR/Petroleum - Well Drilling May 1947
Pumps

"The Problem of Increasing the Durability of
Deep Pumps," A. N. Adonin and A. N. Pirverdyan
(City of Baku), 6 pp

"Neftyancye Khozyaystvo" Vol 25, No 5

Problem of underground repair and exchange of
valves. The elimination of breakdowns. Tables
and graphs showing relationships between running
time, leakage, optimum-clearance, etc.

USER/Petroleum Industry Pumps - Operation

Oct 1947

"Two Methods of Operating a Deep Pump Unit," A. N. Adomin, 6 pp

"Neftyanoye Khozyaystvo" No 10

Discussion of the static and dynamic methods of operating a deep pump unit and the results obtained by each. The article is accompanied by graphs and tables of the results of comparative operating by each method.

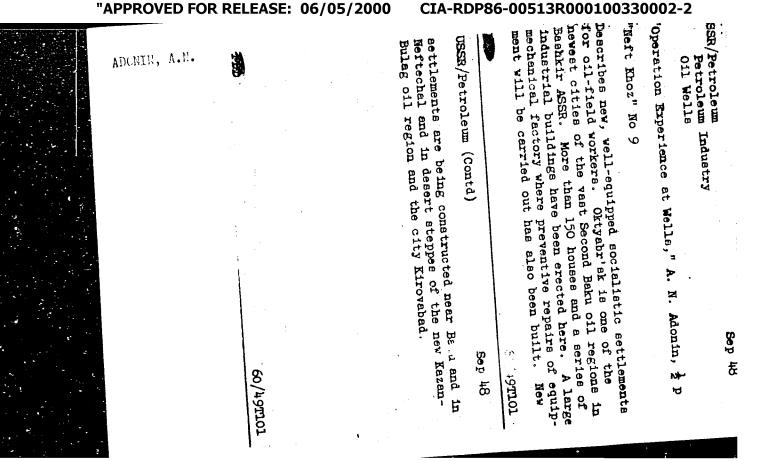
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APONIN, I. H.

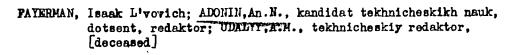
Adonin, A. N. and Firverdyan, A. N. "On the small-guage 35KN-7 tool", (in connection of the article by K. S. Aliverdizade and A. N. Rabonovich entitled "The small-guage long-stroke 35KN-7 vibrator", in the periodical Meft. khozvo, 1 AJ, No. 6), Neft. khoz-vo, 1 No. 12, p. 13-14

SO: U-2858, 12 Feb. 53, (Letopis! Zhurnal 'myth Statey, No. 2, 1949).



PIRVERDYAN, Aleksandr Mikhaylovich, doktor tekhnicheskikh nauk;
ADONIN, Anatoliy Mikiforovich, kandidat tekhnicheskikh nauk;
LISIKYAN, K.A., redaktor; AL'TMAN, T.B., redaktor.

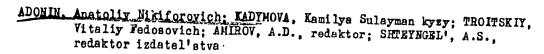
[Problems in the hydraulics and efficient operation of deep-well pumps] Voprosy gidravliki i rabotosposobnosti glubin-nogo nasosa. Baku, Azerbaidzhanskoe gos.izd-vo neftianoi i nauchno-tekhn.lit-ry, 1955. 191 p. [Microfilm] (MLRA 9:1) (Pumping machinery)



[Rods for deep-well pumps] Shtangi dlia glubinnykh nasosov.

Baku, Azerbaidzhanskoe gos.izd-vo neftianoi i nauchno-tekhnicheskoi lit-ry, 1955. 321 p. (MIRA 9:4)

(Pumping machinery)



[Experience in using gas anchors] Opyt primeneniia gazovykh iakorei. Baku, Azerbaidzhanskoe gos.izd-vo neft. i nauchno-tekhn.lit-ry, 1956. 53 p. (MIRA 10:9)

SOV/124-58-7-7783

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 7, p 68 (USSR)

Baryshev, V.M., Ibragimov, E.I., Adonin, Al.N. AUTHORS:

On the Petroleum Yield as a Function of Seepage Speeds TITLE: •

(Zavisimost' nefteotdachi ot skorostey fil'tratsii)

PERIODICAL: Tr. Azerb. n.-i. in-t po dobyche nefti, 1956, Nr 3, pp 5-30

A description and an analysis of experiments on the dis-ABSTRACT: placement of petroleum by water, conducted at the AzNII (Azerbaydzhan Scientific Research Institute) for petroleum production over a number of years, is given. As indicated by the authors, the experiments were conducted for different types of petroleum with and without the presence of residual water in the porous medium. In models, the porous medium was represented by tightly packed quartz sand. The authors assert that during the experiments in the years of 1953-1955 they performed analog simulation that took into consideration the viscosity and the surface tension of the oil, also the speed of advance of the water-oil contact interface in full-scale conditions. The article fails to mention any similarity criteria confirming the previous

statement. The magnitude of the petroleum yield during the Card 1/2

SOV/124-58-7-7783

On the Petroleum Yield as a Function of Seepage Speeds

time of water-free exploitation period is studied as a function of the speed of advance of the water-oil contact interface when displacing petroleum with salt water and alkaline water. The yields of various types of petroleum by saltwater flooding as dependent upon the speed of liquid scepage during the flooding period are investigated. Deductions derived from both types of investigations are presented. A series of specific practical recommendations concerning the working of oil-bearing deposits currently under exploitation are considered unfounded, since the solution of these problems should be carried out by means of a substantially wider theoretical framework, including considerations such as petroleum geology, underground hydrodynamics, and pertinent economics. Bibliography: 10 references.

M.D. Rozenberg

1. Petroleum--Production 2. Fluid flow--Theory 3. Hydrodynamics--USSR

Card 2/2

GUSEYNOV, G.S.; ADONIH, An.N.

Wear resistance of deep well pumps based on oil-field data.

Trudy AzNII DN no.6:49-65 '57. (MIRA 12:12)

(Oil well pumps)

ADONIN, An.N.

Efficient fluid distribution in sectional anchors. Trudy AzMII DN no.6:159-168 '57. (MIRA 12:12) (Oil well pumps)

TROITSKIY, V.P.; ADONIN, A.N.

Equipment depletion in directionally drilled wells. Dokl.AN Arm. SSR 24 no.2:14-17 '57. (MIRA 10:4)

1. Sotrudniki Azerbaydzhanskogo nauchno-issledovatel skogo instituta po dobyche.

(Oil wells--Equipment and supples)

ADONIN, An.N.; BUZDAKOV, A.P.; RUSTAMOV, E.M.

Improvement in the manufacture and the use of deep well pumps in oil fields. Azerb.neft.khoz.36 no.2:22-23 F 157.

(MLRA 10:4)

(Oil well pumps)

ADONIN, A.N., kend.tekhn.nauk; ALIVERDIZADE, K.S., kand.tekhn.nauk;

AMIYAN, V.A., kand.tekhn.nauk; ANISIMOV, Ye.P., inzh.; APRESOV,

K.A., dotsent; BELKN'KIY, V.N., inzh.; BOGDANOV, A.A., kend.

tekhn.nauk; GORBENKO, L.A., inzh.; DANIELYAN, A.A., inzh.;

DAKHNOV, V.N., prof.; IVANKOV, R.A., inzh.; KORNEYEV, M.I., inzh.;

LAVRUSHKO, P.N., inzh.; LESIK, N.P., inzh.; LOVLYA, S.A., kend.

tekhn.nauk; LOGINOV, B.G., kand.tekhn.nauk; MININZON, G.M., kand.

tekhn.nauk; MOLCHANUV, G.V., kand.tekhn.nauk; MURAV'YEV, I.M.,

prof.; MUSHIN, A.Z., inzh.; OL'SHVANG, D.Ye., inzh.; PODGORNOV,

M.I., inzh.; FAYERMAN, I.L., kand.tekhn.nauk; FOKINA, Ye.D., inzh.;

EFISHEV, A.M., inzh. [deceased]; YERSHOV, P.R., vedushchiy red.;

MUKHINA, E.A., tekhn.red.

[Reference book on petroleum production] Spravochnik po dobyche nefti. Moskva, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry. Vol.2. 1959. 589 p. (MIRA 13:2) (Oil fields--Production methods)

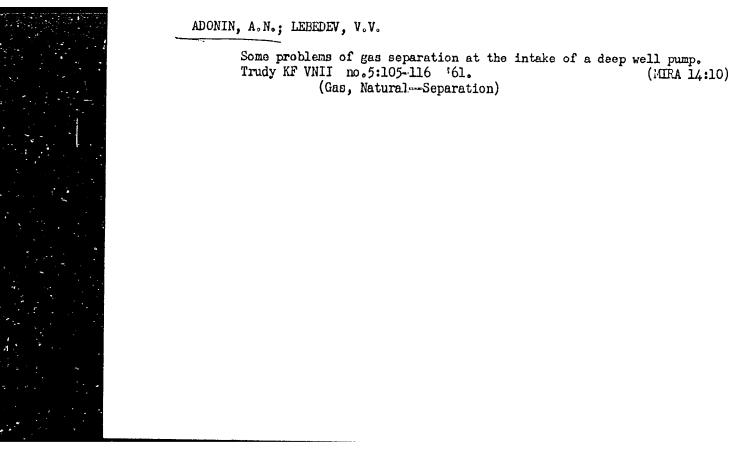


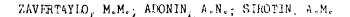
LEREDEV, V.V.; ADONIN, A.N.; GABRIYELOV, L.V.

Problems in using gas anchors. Trudy KF VNII no.5:92-104 '61.

(MIRA 14:10)

(Oil wells--Equipment and supplies)

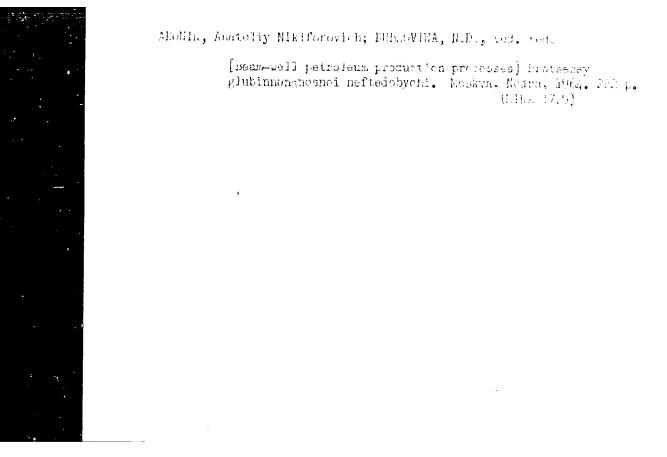




Experimental study of the heat-transfer coefficient of doublepipe gas heat exchangers. Gas. delo no.6/7:60-64 153.

(MIRA 17:10)

1. Krasnodarskiy filial Vsesoyuznogo neftegazovogo nauchnoissledovatel'skogo instituta i Moskovskiy ordena Trudovogo Krasnogo Znameni institut neftekhimicheskoy i gazovoy promyshlennosti im. akad. Gubkina.





Let's fulfill the seven-year plan in five or six years. Sov.profsoiuzy 7 no.4:42 Mr 159. (MIRA 12:4)

1. Predsedatel' zavkoma profsoyuza elektrotekhnicheskogo zavoda "Transsignal," Kiyev.

(Kiev--Electric industry workers)

SHESTOPALOV, V.P.; ADONINA, A.I.

Effect of recurrent annular slits and of a layer of dielectric material on wave attenuation in a round wave guide. Zhur.tekh. fiz. 29 no.12:1457-1461 D 159. (MIRA 14:6)

1. Khar'kovskiy gosudarstvennyy universitet imeni A.M.Gor'kogo. (Wave guides)

9,1300

S/141/61/004/004/014/024 E140/E435

AUTHORS: Shestopalov, V.P., Adonina, A.I.

TITLE: On helical waves in a helical waveguide

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiofizika,

v.4, no.4, 1961, 703-711

TEXT: The authors apply the helical coordinate system proposed by R.A.Waldron (Ref.4: Quart J. Mech. Appl. Math., v.11, 4 (1958)) and averaged boundary conditions to obtain the dispersion equations and formulae for the attenuation of TE and TH-helical waves in a tape helical waveguide. There are 6 figures and 6 references: 5 Soviet-bloc and 1 non-Soviet-bloc. The reference to an English language publication is quoted in the text.

ASSOCIATION: Khar'kovskiy gosudarstvennyy universitet

(Khar'kov State University)

SUBMITTED: January 31, 1961

Card 1/1

S/058/63/000/002/063/070 A160/A101

AUTHORS: Adonina, A. I., Sidorenko, B. G.

TITLE: The propagation of electromagnetic waves in a ring-type waveguide

with a dielectric film

PERIODICAL: Referativnyy zhurnal, Fizika, no. 2, 1963, 25 - 26, abstract 2Zh159

("Uch. zap. Khar'kovsk. un-t", 1962, v. 121, Tr. Radiofiz. fak., 5,

95 -99)

TEXT: An investigation is carried out of a waveguide consisting of infinitely thin coaxial rings provided with a dielectric film on their external or internal side. A characteristic equation for the waves  $E_{mn}$  and  $H_{01}$  was obtained. The equation was solved by the method of small perturbations – assuming that the gaps between the rings are narrow and the thickness of the dielectric film is small. The attenuation of the waves  $E_{11}$  and  $H_{01}$  was calculated as an imaginary part of the longitudinal propagation constant. It is considered that the attenuation was caused by the presence of  $\varepsilon^{\prime\prime}$  in the dielectric-film material and by the energy leaked through the gaps between the rings. Numerical calcula-

Card 1/2

The propagation of electromagnetic waves in...

S/058/63/000/002/063/070 A160/A101

tions were carried out for the values  $\varepsilon'$  of the film material 2.5 and 5, and for  $\varepsilon''/\varepsilon' = 4\cdot 10^{-4}$ . It follows from the calculations that in case the dielectric film is located outside of the waveguide, the attenuation does not depend on the thickness of the dielectric film. In case the dielectric film is located on the internal side of the waveguide, the attenuation of the wave  $E_{11}$  is proportional to the thickness of the dielectric film, and the attenuation of the wave  $H_{01}$  is proportional to the third power of the thickness of the dielectric film. The attenuation of the wave  $E_{11}$  is directly proportional to  $\varepsilon''$  and is inversely proportional to  $\varepsilon''$  of the dielectric film material, and the attenuation of the wave  $H_{01}$  does not depend on  $\varepsilon''$  and  $\varepsilon'''$  (the dielectric is located on the external side of the waveguide). To attain a stronger filtration, it is necessary to select a dielectric film with a higher  $\varepsilon'''$  value and a small  $\varepsilon''$  value. When decreasing the structure period, if the fill factor remains constant, the attenuation of the wave  $H_{01}$  decreases.

V. Vzyatyshev

[Abstracter's note: Complete translation]

Card 2/2

L 10308-63 EWT(1)/EEC(b)-2/BUS--AFFTC/ASD/ESD-3--IJP(C) ACCESSION NR: AP3000169

\$/0141/63/006/002/0416/0418

AUTHCR: Adonina. A. I.

TITLE: Electromagnetic-wave diffraction at a planar shielded array with a dielectric (inclined incidence case)

SOURCE: Izvestiya vysshikh uchebnykh zavedeniy, radiofizika, v. 6, no. 2, 1963, 416-418

TOPIC TAGS: electromagnetic-wave diffraction shielded metal array

ABSTRACT: The mathematical method suggested by Z. S. Agranovich, et al. (ZhTF, 32, 381, 1962) is used to solve the diffraction problem. The problem is interesting for both the theory of diffraction phenomena in planar arrays and the practical applications of shielded arrays mounted on dielectrics. The solution also permits establishing the boundary conditions that can be used in studying ring-type and helical waveguides. Formulae for reflection factors for E- and H-polarized waves as well as for the boundary conditions are given in the article. Orig. art. has: 6 formulas and 1 figure.

ASSOCIATION: Khar'kovskiy gosudarstvenny\*y universitet (Khar'kov State University) Card 1/2/

L 10000-63

ENT(1)/BDS/EEC(b)-2--AFFTC/ASD/ESD-3--IJP(C)

ACCESSION NR: AP3000991

s/0109/63/008/006/0950/0958

AUTHOR: Adonina, A. I.; Shestopalov, V. P.

58 57

TITLE: <u>Diffraction of electromagnetic waves</u> in a plane metal grid with screen (case of arbitrary incidence)

SOURCE: Radiotekhnika i elektronika, v. 8, no. 6, 1963, 950-958

TOPIC TAGS: EM wave diffraction, diffraction in a grid

ABSTRACT: An analysis is given of the diffraction of EM waves which pass through an infinitely thin, perfectly conducting metallic grid and impinge on an adjacent parallel metal screen. With the assumption that wave polarization and angle of incidence are arbitrary, equations are derived which define the resultant E and H fields in the grid apertures as well as in the metal elements of grid and screen. The dimensional variables are grid aperture, grid wire water and spacing between grid and screen, all expressed as ratios of incident wave length. By way of illustration, the particular case is considered where the E vector is parallel to the grid wires and the problem reduces to the simultaneous

Card 1/2

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ACCESSION NR: AP3000991

solution of eight equations. Graphical results are given for this solution, showing the reflection factor as a function of the above dimensions and of angle of incidence; on consideration of the diffraction spectrum, it is seen that the reflection factor increases generally with angle of incidence for the fundamental, but decreases with the angle at harmonic frequencies. It is noted that with sufficiently remote spacing of the parallel screen from the grid the problem reduces to one involving the grid alone --- a case already analyzed by Agranovich, Marchenko, and Shestopalov (ZhTF, 1962, 32, 4, 381). Orig. art. has: 5 figures and 19 formulas.

ASSOCIATION: Khar'kovskiy gosudarstvenny\*y universitet im. A. M. Gor'kogo (Khar') State University)

SUEMITTED: 04Jun62 DATE ACQ: 01Jul63

ENCL: 00

SUB CODE: 00

NO REF SOV: 002

OTHER: 000

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L 12907-63 EWT(1)/BDS/EEC-2/EED-2 AFFTC/ASD/ESD-3/APGC Pj-4/Pk-4/P1-4/ Pin-IJP(C)/WR ACCESSION NA: "AP3001322 S/0057/63/033/006/0641/0651

AUTHOR: Adonina, A. I.; Shestopalov, V. P.

TITLE: Diffraction of electromagnetic waves obliquely incident on a plane metallic grating backed by a dielectric layer

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 33, no. 6, 1963, 641-651

TOPIC TAGS: diffraction, gratings, transmission

ABSTRACT: The problem of the diffraction of plane electromagnetic waves obliquely incident on a thin infinite plane metallic grating backed by a dielectric layer of finite thickness is solved for the case in which the plane of incidence is normal to the rulings. Several curves are given showing the transmission coefficient for the directly transmitted beam as a function of wavelength for a number of angles of incidence and values of the ratio of metal to open space in the grating. The curves all refer to the case in which there is no dielectric backing. The points at which spectra of successive orders first appear are marked on these curves by peaks or changes of slope. From these curves and others not published, the authors draw the following conclusions concerning the transmission coefficient for the directly transmitted beam: 1) The transmission coefficient decreases with increasing angle Cord 1/32

ACCESSION NR: AP4009939

S/0057/64/034/001/0168/0173

AUTHOR: Adonina, A.I.; Shcherbak, V.V.

TITLE: Diffraction of obliquely incident electromagnetic waves by a plane metallic grating and reflector separated by a magnetodielectric

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.1, 1964, 168-173

TOPIC TAGS: diffraction, electromagnetic waves, oblique incidence, grating, grating and reflector, equivalent boundary conditions, magnetodielectric, microwave antennas

ABSTRECT: This paper treats the diffraction of obliquely incident, arbitrarily polarized plane electromagnetic waves by a complex structure consisting of an infinite plane metallic grating and a parallel plane reflector separated by a layer of material with arbitrary complex dielectric constant and magnetic permeability (magneto-dielectric). This problem is believed to have practical applications to microwave antenna and measuring technology, where it is frequently desirable to support a metallic grating or other structure on dielectric material. The incident and reflected waves and the field in the dielectric between the grating and the reflector are

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expanded in Fourier series and the boundary conditions on the grating and the reflec tor are expressed in terms of the coefficients. The resulting equations are transformed into an infinite set of inhomogeneous linear equations for the expansion coefficients by methods expounded elsewhere (Z.S.Agranovich, V.A.Marchenko and V.P. Shestopalov, ZhTF, 32, No. 4, 1962; A.I. Adonina and V.P. Shestopalov, Ibid. 33, No. 6, 1963). This transformation involves the solution of what the authors call an inhomogeneous conjugation problem: to find two functions, one analytic inside the unit circle and one analytic outside it, such that their difference vanishes on an arc of the unit circle and their sum assumes preassigned values on the remaining portion of the circle. The resulting system of linear equations for the expansion coefficients is convergent and can be solved approximately with an electronic computer. No numerical results are given. In the long wavelength limit, the equations for the expansion coefficients can be solved analytically to obtain "equivalent boundary conditions" for the diffracting structure. These conditions are obtained. When the dielectric constant and permeability are unity and the reflector is removed to infinity, these equivalent boundary conditions reduce to those previously obtained for a plane grating by N.N.Smirnov (ZhTF, 28, No. 7, 1958). Orig.art.has: 29 formulas.

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ACC. NR: AP4009939

ASSOCIATION: Khar'kovskiy gosudarstvenny\*y universitet (Khar'kov State University)

SUBMITTED: 06Dec62

DATE ACQ: 10Feb64

ENCL: 00

SUB CODE: PH, GE NR REF SOV: 006

OTHER: 000

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